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P LP NQQF ${ }^{10}$ 10
NQQF GVSLQHLQEKNP PLPNQQF GVSLQQLREKNS

2030



$P G P N Q V F G V S L E F I M E N N N$





| $G$ | $E$ | $L$ | $P$ | $P$ | $V$ | $L$ | $R$ | $L$ | $T$ | $V$ | $T$ | $Y$ | $L$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $N$ | $G$ | $E$ | $K$ | $G$ | $L$ |  |  |  |  |  |  |  |  |
| $I$ | $R$ | $P$ | $E$ | $L$ | $L$ | $Q$ | $K$ | $I$ | $E$ | $F$ | $I$ | $K$ | $M$ |
| $H$ | $G$ | $I$ |  |  |  |  |  |  |  |  |  |  |  |




I R DNVF GCHLA T L C A Q
QEK T TVVPRFVEKCIKAVEKRGL


| $E$ | $G$ | $Q$ | $F$ | $V$ | $P$ | $K$ | $L$ | $Q$ | $Y$ | $C$ | $I$ | $E$ | $A$ | $I$ |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $Q$ | $E$ | $A$ | $K$ | $G$ | $L$ |  |  |  |  |  |  |  |  |  |
| $Q$ | $T$ | $T$ | $V$ | $P$ | $R$ | $F$ | $V$ | $E$ | $K$ | $C$ | $R$ | $A$ | $V$ | $E$ |

GTNK MFGNDL K K K Q VQA EK S KVPLVV EK C E S V E S R GM

$\square R \mathrm{D} Q \vee \mathrm{~F}$ G C R L D A L C E R $F G \square P L N Q L M Q N D T$
$D Q V F G C R L E A L C Q R$

KLF GVSLQELQQQGLT

$\square K D Q V F G C R L D A L C E R$
PDALFGTELEA RQEYEKTTM
P $\square$ A T
 $R V F G V S G Q V I P B V R Q C V D F L T T D A L$
TKVFGASLEALRDQGLLEDGVPLVVRRMVEHLRKHAL
 RTHQF GVTLREDIRNSACLNCIPPIVRKCVDHLS SNVI

$P \vee R T P L F G I D F L Q L P R D F P$

 SMFGRSLTE Q Q A A HEGRDVPLIVDKCI QAVEAFGM
$P$ VP GK LFG G L L P A ICEND N $\square K E Q V F G C P L Q T L C E R$

E G S A
$P$ LG GA IF GQ H LEE E T M A Q C G S Q R L V P A L V

P LIE S N Y F G V

## NGLFGSDLEE QRLEVE

$\square K D Q V{ }^{F} G M P A Q Q D L V D R$
F GSDLVSLAR
$\square K D Q V F G C C L E M L C E R$
PVPTSLF GVPLEELMGYDGE
RKSVYGVSLDVLMQ
PS TLF G SEL S E
RTEYEH
PLCKGIF GQRLEDTVERKYGSRQAPSVVSRCVEVELRGM LHTPVYGQPLEEDHLTR
 FRKGTFGQKLEDTVEKRYGNHLAPLLVEQCVDFI RLRGL PAAGQLFGVSLPDICENDN
 CPPRAFGVRLEEDCQPAAE LK E

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GLFGSDLSERCEF
$R R N T T F G V D F Q E Q V D T F Q T$
GQHFGVRVCHLVNDKSPVPMVLEMMLEHVEMQGL


## $\square R D Q V F$ GCRLEALCQR

LKERVFGCDLGEHLLNS
目 GLDVPQVL VTEGIPTLVWN TLIGVQLKDLHM STLFGSELAERCEY EHRQIPSVVTRCIEEVELRGM



## QUERY

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UniRef90＿S2K4E2
UniRef90＿UPIO004416C0C
C3732E
$4 F 3583$
$2 A E 86 C$
$432 A 4 E$




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TTEGDFRRSANTQVVREVQQKYNMGLPVDFDQYNALHLPA $T I Q G I F R R S A N T Q T V R E V Q Q K Y N M G L P V D F A T Y E D V H L P A$
 D I D G L Y R V S G NL A T I Q R Y K V D H D E H L L D L D D G R W E D I I M V I T DV D GIVRRSSNAS LVKSVKARYDSGGSVNFQVCGDPHLPA
 HTE GL F R R R A SAQ TV




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## QUERY <br> UniRef90_J3S4Z6 UniRef90_UPI0003F085AA UniRef90_U318Q2

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VITTBE 130
140
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160
VL Q LPE E Y QVLRFLTAF LVQ S A HSDQNKMTNTNLAVV
 DVRSLPVPNHDPLRVLFQHLCRVI EHGERNRMSVQNVAIV DLVYSLPPANHDTMMFFRHLCRVI EYKEENRMSVQSVAIV

 I LRSLPEHNYALLRYLMAFLHAVSQESULNKMNSSNLACDV
 V T E
 LVLNMPPPNHDTLQFMCRHLRRVLEYSDTNRMTTQNIGIV LVKSLPSANHDTMKLLFGHLRRVIQYGDDNRMTVQNVAIV

 $L$ V T




## L

 $\stackrel{\mathrm{L}}{\mathrm{V}}$| $L$ |
| :--- |
| $L$ |
| $\frac{L}{L}$ |
| $P$ |
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UniRef90
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UniRef90-HOWHF4
UniRef90-J9JUC1
UniRef90-EOVEE4
UniRef90_G3NJ52
UniRef90_Q9BRR9
UniRef90_G3UMG0




E
$K$ K F N G D L E KIFGVPLQELCQR

VPD
$P \times \square K$ $K$ K GVPLQELQQRGDTEH

PKQLF GAPLSSTVCDNQSSQA GSTF GПP EDCD GATFGVDL GDCQLQRDVT
LK $R V F G C D L G E H L L N S$
$P M F G L D L G R L Y E R D$
$\qquad$ $\begin{array}{r}\mathrm{A} \\ \mathrm{Y} \\ \hline\end{array}$

GHDVPQVLK SCTEFI

GAVF GQSLSETVAYEQKTHLVPVLVEKCVEF NLYGL KLFNGSMEAFIKDS GQAIPLVVESCIRYI NLGYGL LPRPVFGVSLEEHLSVHREKYA PPEGATFKVPLE LCPRAPDSDVPMIVEICTRIV
 RPRPVFGVDLTEHLRHTQ GRVAVVLEKCCSMLVASGL
 PLKNEVF GVPLSVGVKKSGWRFPLP I YRCLEYLEKNDG NQQFGVSLQHLREKNPEQDPI P
PPVNPVFGITLEDLFHRD
PTFGVDLA NQMARD
PMPSS

PSPGRDFGLPLSAVCEDDS
PQRRKMFTVSLLELRDLGLLEDFLPKPVMDMLCFLFQEGP
PQRRKMFTVSLLELRDLGLLEDEVPAVVRRLVEHLOKQGL PAFGTALEEHLKRTNRDDALPAVIEACVMMLLETGM
PARDPVFGCYLEQACSHSTGVGKVPLFVQRCVSFI EEENM

PLPPSMFGRDLIEQVKADSKDRTIPILVEKCIDAVEALALL VF GRPLVEHLAA VDRNIPHVVDACVKEI RRRGM


RNQDS
$G F E$
$K$ LIF G S L E EY DE S
SGQA
PART
PARTQLF GVDFSQLPRDFPE

$\qquad$ FGCDLIEHLESS GQDVPQVLKTCAEFIEEHGLV
TRVFGVPLRSCCMSKVNAYVPHLVEVCTNDVETKGL

PTGPPMFTGDLAA QADKEGS
】KETVFGCPLDKLCEKEQT RLFEGSLEEYLEA
PRKMTTFGVDLTDHT
S GVF GKGLVDTVEQ
KPKLFGGTI DEYVEA
LRERVFGCDLGEHL

## DANQE

RF GPHMVP
TKQPI PCILQSCTRADVQFGM
LGSHQF GVHVADLZKNDTNSVPVVMEILLEYLEDHGL

UniRef90_W5KVS7 UniRef90_E5SWZ3
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UniRef90_H2SVF4 UniRef90_H2SVF4
UniRef90_UPI00032AEB93 UniRef90_UPI000298920A UniRef90_UPIO0033195E6 UniRef90_Q0CBY3 UniRef90_UPI000273B479 UniRef90_UPI00038415F4 UniRef90_V5GPN2 UniRef90_J4UJ09 UniRef90_UPI0004574B38 UniRef90_C7YMR6
UniRef90_E5A6L9
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UniRef90 UPI0002A UniRef90_UPIO002A4C564 UniRef90_W5MXS5 UniRef90_UPI00038378C0 UniRef90_UPI0002A4C95C UniRef90_U6HKU4 UniRef90_A0A023EZK UniRef90_F7AS53 UniRef90_UPI0001E47AA3 UniRef90_UPI0003C47E0B UniRef90_F8NV57 UniRef90_E9BWN4 UniRef90_UPIO003945CC0 UniRef90-UPl0003
UniRef90 F1KT29 UniRef90_F1KT29
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UniRef90 Q17D27 UniRef90_A9V5R3 UniRef90_HOWHF4 UniRef90_J9JUC1 UniRef90-EOVEE4 UniRef90_Q9BRR9 UniRef90_G3UMG0 .

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QQSGVVRVCGSPRCKLLRLSLLDCGEPDDLVRGDVPTVAAL NAEGLFRISGNALKIRRLKASFDAGEIELSEFEHDPHSTA

 TEEGUYRVSGNKAEMESMQKQFEQDHGDQVEKDFSVNTVA EYTGUYRVPGNNAMVQEQLNKGTTDLNTSEEKWQDLNV
 QHQGUFRVSGSQVEVNDIKNSFERGENPDDQSNHDINSVA EVDGMYRVSGNLATVQRFIVDHEEHLDVDHSQWEDIHVVT DMEGIYRLSGSANHISQMNDSSQVDFTNPENFYHDVNSVA STEGIFRKSASIKSCRALQKKLNCGDTVNLNEEPMLVISA


e NVGl Y

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QSQGi R P GTS SHIQQMKALFDSEAFQHDVNSVAGLLKQ QEDGLYR SGMTSKVA QLKERLDRDNFDSEEWTSDUNNVT QEDGLFRRSPSSAMLRAAQEAYDRGNVVSDDTFGDPNNVA

 H H E G L F R IIA A GA S K L K K L K A A L D C S T S QLLAE E F Y C D P H A V A

H







F T F G L F R L P G Q A T L V K E L Q D T F D S G GK P T F D K H IL Y T I T S


 H D E G L F R R S P NT V M L N Q A K Q A Y D R G HPVVSLE S Y R D P H L A A

 ATKGI F R R R SANAK T CK E L K E K L N S G S E V H M E IE SVVFVA A A

 $\begin{array}{llll}E & \text { E } & \text { I } & F \\ \text { F } & \text { F } \\ \text { F }\end{array}$

| D | V | D | G | l | Y | $R$ | $V$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| C | S | G |  |  |  |  |  |
| Q | G | l | Y | R | V | S | G |


|  |  |
| :---: | :---: |
| UniRef90-W5KVS7 |  |
| UniRet90-D2VEV1 | YLKKLPEPLTSYELY Y DFMEDGRTRKNKPR |
| UniRef90-M4AEV9 | SLCKLYFRELPNPLLTYELYSKFTEVS |
| UniRef90- ${ }^{\text {R9AG57 }}$ | SVVKQWFRELPEPLLTYQL |
| UniRef90-W5K2T8 |  |
| UniRet90-B6QT21 | VNSVAGLLKQFFRELPDPLFTRQFYNDFINAARDENDGQR |
| UniRef90 UPIO004573A5E | SLLKLFFRKLPEPLFTDDKYGDF ENRLEDSAERLQTFKK |
| UniRef90-13K681 | SLLKLY |
| UniRef90_H2SVF4 | GVLKLYFRGLENPLFPKERFND |
| UniRe990-UPIO0032AEB93 | GVLKLYFRGLENPLFPKERFNDLISCIRLDN |
| UniRef90-UP1000 | GALKMFFRELPEPLFPFRFFPLFVDALKMKD |
| UniRe90 - | GLLKQFFRDLPDPLFTSQAYADFISAARDDDDQQRRDSHA |
| UniRet90-UP1000273B | GVLKLYFRGLEHPLFPKDIFPDLMSCVSMDNQER |
| UniRef90 UPI00038415F4 | VLKDFLQNIQGSIFSSSPYDKWLDVI DQGNEED |
| UniRef90- V5GPN2 | SLLKSYFRKMPESLVTDQLYPNFIKADKIEDPKLRM |
| UniRef90-J4UJ09 | GALKLWFRELPEPLLTYGLYHGF |
| UniRef90-UPI0004574B38 | SLCKLYFRELPNPLLTYQLYEKFSDVSVASDE |
|  | GLLKQFFRDLPDPLLTLEHHDSFIAAAKHDDDTVRRDSHA |
| UniRef90-E5A6L9 | SALKNYFRRL |
| UniRergo_BS |  |
| UniRet90_WSUAHO |  |
| UniRet90_UPIO003F0, |  |
| UniRet90_G1QUP0 |  |
| H2VG |  |
| Un |  |
| A0A016S9 | LHNEWVNAAKLEDEAKLQA |
| UniRef90-UPI0001CB9A66 |  |
| UniRef90-C4M5E9 | GLIKLYLRELPDSLIPKSMYNTFLELPTSSDLNN DIKK |
| UniRet90_S9YIQ6 |  |
| UniRet90_Q86ZW2 |  |
| UniRet90-F8P8 | RELPDPULTFVLHQGFIDAAKDEND |
| 2 | KYLRDLPEPMFPESLYPTIRRCPMPTSDPGDMSAVM |
| UniRef90-UPI0002A4C564 | RKLPEPLFTNDKYNDFIDNRDENATDR |
| UniRef90 W5MXS5 | VFKDFLRNIPGSLLSLELYDRWVSVMDQGRDEQRURATQS |
| UniRet90-UP100038378C0 |  |
| UniRet90_UPIooora4C950 | GI |
| UniRet90_U6HKU4 |  |
| UniRef90_A0A023E2 | E |
| UniRe | - |
| UniRef90-UP10001E47AA3 | S C |
| UniRef90-UP10003C4 | S S S |
|  |  |
| UniRe990-E9BWN4 |  |
| UniRet90_UPIOOO3945CC0 | SVFKQWLRDLPNPLMTFELYGEFI RVMGLQDKKELIRVYS |
| UniRef90 UP1000392D | GVLKHFLKELSVPVLLSQLYDDLI ALAKDLQKPPIQSMKE |
| UniReef90-F1KT29 | H |
| UniRe990-UP100035010D5 |  |
| T11289 |  |
| UniRee90 UPIO0044326 |  |
| 3CXE0 |  |
| A0A015L8 |  |
|  |  |
| UniRef90 Q4T4M2 | N |
| UniRef90-05XIX9 | RLEA |
| UniRef90-G0T012 | R |
| UniRet90_H2SXP5 |  |
| H2Z807 |  |
| UniRet90 L7M6Z2 |  |
| UniRef90-V5IGZ9 |  |
| UniRef90 G3PIW2 | K |
| UniRef90-H2KSE3 | RELGEPPFPHSITFKNLIECTNKQSDMDETARRLIRQV |
| UniRef90-G6DBL5 | SLLKMYFRELPNPLCTYQLYDSFVSAVTAPEQLRLKAVRD |
| UniRef90 UP100034F8228 | GILKQW |
| A7S254 |  |
| UniRef90_UPI0003EADF90 | R NMK |
|  | LYFRELPNPLLTYELYEKFTEVSHRPEEGQLARIQN |
|  | ELYEEFLRAMQPDKREVIRG |
| UniRef90_UPI00033339D5 | KAFFRELPTSLLFPVEYI PAFITLMERGYHIKKVQQALHIL |
| UniRef90-UPI0004441A05 |  |
| UniRef90-F6XFX6 |  |
| UniRef90 UPI0003C27131 | V |
| UniRef90 ${ }^{-}$W5J443 |  |
| UniRef90-W5MHSO | SLMKLFLRELPTSLIPAVLHTDLI TAFRESKDEAELINHLL |
| UniRef90_T1JQ76 | VILKSFLRELEEPLLTFDLYDDVIDFQQISSGNHSQUEKL |
| UniRef90_J3PMV7 | ALLKKFLRDLPDPLLTFKLYHLFIIASQRVDNDAARRK |
| UniRe990 UPIO003AF4F82 |  |
| UniRef90_UPP00044152EC |  |
| UniRet90_UPI0004435C4B | GALK SYLRELPEPLMTFNLYEEWTKVAVQDQDKKLQDLWS |
| UniRet90_13L733 |  |
| UniRef90 G1XJY7 | KLP TPLIT Y TIY DRMVDSVKIIA DVE QRKEAVK |
|  | VITPFLRNIPGSVLSSELYERWMEGTENENEEEKIQALKK |
| UniRef90-F1QE19 |  |
| Q17D27 |  |
| UniRef90_A9V5R3 |  |
| UniRet90_HoWHF4 |  |
| UniRet90-J9JU |  |
| UniRe |  |
| UniRet90-G3N. | GALKSYLRELPEPLMTYELYEDWIQASNQQKMDSLLYLL |
| Ref90_O9BRR9 | ELPQPLVPPLLPAFRAALSESECLSQLQE |
| UniRef90_G3UMG0 |  |

UniRef90 W5KVS7 UniRef90-E5SWZ3 UniRef90-D2VEV1 UniRef90-M4AEV9
UniRef90_R9AG57 UniRef90-W5K2T8 UniRef90-B6QT21 UniRef90_UPI0004573A5E UniRef90_I3K6B1 UniRef90-H2SVF4 UniRef90_UPIOOO32AEB93 UniRef90-UPIO00298920A UniRef90_UPIODO33
UniRef90_QOCBY3 UniRef90_UPI000273B479 UniRef90-UPIO0038415F4 UniRef90-V5GPN2 UniRef90-J4UJ09 UniRef90_UPIO004574B38 UniRef90-C7YMR6
UniRef90-E5A6L9 UniRef90-B0S8J8 UniRef90-W5UAH0 UniRef90-UPIOOO3F0AA63 UniRef90-G1QUP0 UniRef90-H2VGD2 UniRef90-E2BKC4 UniRef90_A0A016S9Vo UniRef90_UPIO001CB9A66 UniRef90_C4M5E9 UniRef90-S9YIQ6
UniRef90 UniRef90_Q86ZW2 UniRef90_V2WLZ3 UniRef90_UPI0002A4C564 UniRef90-W5MXS5 UniRef90_UPIO0038378C0 UniRef90_UPIO002A4C95C UniRef90_U6HKU4 UniRef90-A0A023EZK1 UniRef90-F7AS53 UniRef90-UP10001E47AA3 UniRef90_UPI0003C47EOB UniRef90-F8NV57 UniRef90-E9BWN4 UniRef90_UPIO003945CC0 UniRef90_UPIO00392DB01 UniRef90_F1KT29
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UniRef90-G0T012 UniRef90-GOT012 UniRef90-H2Z807
UniRef90-L7M6Z2
UniRef90-V5IGZ9 UniRef90-G3PIW2 UniRef90-H2KSE3 UniRef90-G6DBL5
UniRef90_UPI00034F8228 UniRef90-A7S254 UniRef90_UPI0003EADF90 UniRef90-A6X8Z5 UniRef90-H2URU3 UniRef90_UPIO0033339D5 UniRef90_UPIO004441A05 UniRef90-F6XFX6 UniRef90-UPIO003C27131 UniRef90-W5J413 UniRef90-W5MHSO UniRef90_T1JQ76 UniRef90-J3PMV7 UniRef90_UPI0003AF4F82 UniRef90_UPI00044152EC UniRef90_UPIO004435C4B
UniRef90_I3L733 UniRef90-I3L733 UniRef90-G1XJY7 UniRef90_V9KFKO UniRef90_F1QE19
UniRef90_Q17D27 UniRef90_A9V5R3 UniRef90-HOWHF4 UniRef90-J9JUC1 UniRef90_E0VEE4
UniRef90-G3NJ52 UniRef90_Q9BRR9
UniRef90_G3UMG0

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 TVVN QL P D C N Y S T L K Y L M G H L V L R R F P R E N Y E V F F K HV T S S H L N K V S Q W N R V N L M T S E N L S I C


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 L L R D L P E H H F E T L K H L M L H L K K I V E H S E T N K M EA K NL A I V


 YVREI P P CVVYLLSHILDLMMEVSLHVATNRMDAHNLSIV
 L L R Q L L P D L L H Y S L L L Q Y L
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 $\bar{Y} V$ H QL P K T H IDD ML K II I E H L K K V A D R S S E N L M T V G NL G V C
 L V Q S L P R S V V I V $\operatorname{P}$ M R Y LL F A F L $V V$ K E L P A P H F R T L E F L
 YFLQQQLP P L N Y GLLRFL CRFLLASVASF QQESWNVGT A AV

 $A \mathrm{~A}$ Q AL $V V Q S F P R P V F V V L R Y L F A F L N H L S E F S D E N M M D P Y N L A B C D$ L V E QLP S V HR RTLA LL LR HLA RVA QHARKNCMPASN LA I M
 TVVVGK L P P P H Y R T L L S Y VI GQLP HANYNTLER LIFHLVMVAMVEEVNRMSPNSLAIV

 V I D QL S R T H L S T L E RL I F HL VRI A L Q E D T N RMSANAL A IV
 GLLQLPPAHYETLRYLMAHLKRVTTFEKYNLMNAENLGVV LLIVK S L






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L V E E L P E A H L L L L F R H L F T I L L I K D L P D H N Y H TL K F L I GHL K TVVA D HSEKNKMEPRNL ALV

 I R E K L P E D N Y H I L K K Y I V Q F L L A K V M M D R C D D L N K K M T S S S N L A V V L 1 G S M P K P N H D T L R


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UniRef90_UPIO0046B3134 UniRef90_UPIO003EC3706 UniRef90-H3АКD7 UniRef90-Q7PQD3 UniRef90-UPIOOO3F07B2E UniRef90-UPIO0044433A2 UniRef90-B3ML60 UniRef90-UP10003EC1B8E UniRef90 W5KJAA9 UniRef90-C3ZW13 UniRef90-JODQG6 UniRef90-GOS834
UniRef90-BOE8O6 UniRef90-U6NS25 UniRef90-UPIO00440CA47 UniRef90-UPIO003941E7F UniRef90-U3IIP8
UniRef90-UP10003C1AD50
UniRef90-F2RXZ1
UniRef90_U4LVT9
UniRef90 H3CHE9
UniRef90-G3NLA1
UniRef90-G5BE30
UniRef90-M7AUV4
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UniRef90_UPI00046C3925
UniRef90-FOXJ27
UniRet90-B3RMW8
UniRef90-UPIO0045722FO
UniRef90-UP10002B4ADD2
UniRef90-UP1000440BC8D
UniRet90-H9XVN1
UniRef90-C5DRT4
UniRef9O-UPIIOOO4417F80 UniRef90-Q172Z7 UniRef90-UP10001CBB4E0 UniRef90-F4PW26 UniRef90-M4ABY2 UniRef90-V9K8F3 UniRef90_FIKSE7 UniRef90-H2M9KO UniRef90-F7B8H0 Uniref90-A7TGBO
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## UniRef90-D3B6E0

UniRef90-UPIO003C8DF70 UniRef90 UPIOOO4622596 UniRef90-H2TNG1
UniRef90-T1K5Y9
UniRef90-H3F8D2
UniRef90-UP1000395D34E UniRef90-K1R8T3 UniRef90-UPIO0021A43C8 UniRef90-GVVAO UniRef90_UPIO00383696C UniRef90-F6YW11 UniRef90-E9CDU1
UniRef90 E2AJI4 UniRef90-E2AJI4 UniRef90_UPIOO03872664 UniRef90-H2UQB1 UniRef90-F4Q2X3 UniRef90-UPIOOO3956A19 UniRef90 M4ASP9 UniRef90 UP10002651C61 UniRef90-Q3TBD2 UniRef90-BoXKG6 UniRef90-UPIO003833EA6 UniRef90-H2YUM3 UniRef90-UPIOOO2B48072
UniRef90- UPIOOO3C12809 UniRef90-UPIOOO3C12809

UniRef90- W5N4H6 UniRef90-T1KYH1 UniRef90-UPloo00440979B UniRef90-L5KK75 UniRef90-E9GSI6 UniRef90_-9KV666 | UniRef90OUPIOOO32B0956 |
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| UniRefo- |

## 5



UniRef90_Q16IL8
 LQEG| YRKSGARTQUEQUEARFEHYDERANYEEILSSGDVN
 E NMGI YRTSKVQKLKAKFDMDWTSVDLMNDEADQDI NDVA

 RAKGUYRTCGVKSKVEEVCNAFERSSSDDEVCLDNENPMN
 RTKG|YRVNGVKTRVEKLCQAFENGKELVEDSQASPHDIS
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UniRef90_E6ZTLO UniRef90-Q6CF51 UniRef90-U3JUR2 UniRef90 R9P123 UniRef90-UPIOOO38360CE UniRef90-O6DIV7 UniRef90-T1K615 UniRef90-G5EF80 UniRef90-HOWRL1 UniRef90-UPIO0046B3134 UniRef90-UPIOOO3EC3706 UniRef90-H3АКD7 UniRef90_Q7PQD3 UniRef90-UPIOOO3F07B2E UniRef90-UPIO0044433A2 UniRef90-B3ML60 UniRef90-UP10003EC1B8E UniRef90 W5KJA9 UniRef90-C3ZWI3 UniRef90-JODQG6 UniRef90_GOS834
UniRef90_BOE8Q6 UniRef90-U6NS25 UniRef90-UPIOO0440CA47 UniRef90-UPIO003941E7F UniRef90-U3IIP8
UniRef90-UPI0003C1AD50 UniRet90_-2RXZ1 UniRef90_U4LVT9
UniRef90 H3CHE9 UniRef90-G3NLA1 UniRef90-G5BE30 UniRef90-M7AUV4 UniRef90-F4X764 UniRef90_UPI00046C3925 UniRef90-FOXJ27
UniRef90
B3RMW8 UniRef90-UPI00045722FO UniRef90-UP10002B4ADD2 UniRef90-UPIo00440BC8D UniRef90-H9XVN1 UniRef90-C5DRT4 UniRef90-UP100004417F80 UniRef90-Q172Z7 UniRef90-UP10001CBB4E0 UniRef90-F4PW26 UniRef90 M4ABY2 UniRef90-V9K8F3 UniRef90_FIKSE7 UniRef90-H2M9KO UniRef90-F7B8H0 UniRet90-ATGBO
UniRef90_KOKF15

## UniRef90-D3B6E0

UniRef90-UP10003C8DF70 UniRef90-UP10004622596 UniRef90-H2TNG1 UniRef90-T1K5Y9 UniRef90-H3F8D2 UniRef90-UP1000395D34E UniRef90-K1R8T3

90
100
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120
GAVIKTWLIRELIPEPLITFDSYDDLI ATNAMDNDDRLLYAMRD GVASALKQYLRYLPDPSYDAFIDVSSVHQDNKVKVEKMRE NTAKRFFRDLGDGLFTRKWAPDWLWTALEDEEAKVGEYRR GLLKQFFRELPDPLLTSEQYPAFIEAAKHDDETVRRDSHA GCLK LUWFRELPEPLLTHEDYSGFIEAAK DDNDRLRHDRHE
 HVLKEYFRMLPEPIFTSDLYSQFMNVAKKNRTEIINNLKE PEPLLTFELYDDFVRLGTECCSAQASGSNCEEERVEQLRQ TSTLKQYFRKLPTPLITYDVYDSLLEQLQDKEKQVAALRF $N V L K L Y R R Q L P E P L I S F R L Y H E L V G L A K D S A K A R A E A K A A$ NVLKLYRQLPEPLISFRLYHELVGLAKDSLIKAEAEAKAA STLTGALKLYFRQLPI PVESYEVYLDFITTAVQNQTMHKAVVH $S V L K R F L Q E L S D P V V P F H L Y D A F M A L A R G L P A E T G P P S A H$ KMYFRELPNPLCTYQLYDNFVEATQVKADEVDERLRLMKE GLVKQWLRELPDPLMTFTHYNDFLHAVDPEKQEQLHAIYK SLLKLYLRELPEPLVPFSRYQEFLMCIPADREQGLLELKS KL WYRELAEPLIPHKFYEDCVEHDANRIAYDVEKVLNVV SLLKLYLLELPVSSHVYEIIVRQIYNTPTPDGGDRIPILQQ A I KEYLRELPDPLIPFQYYNEFVIIGRGKEGTKEKEAKK FKCEHLYDQWLKAVESPVKRGNVQDEERETQKGRVQEMQR
 SALKHYLRMLPAPLMTYQFQRSF KKA A DNQESRDSELHT ALMKKFLREMPDPLLTFKLHSLFVVAQKIVADPVKRKRVLH ALLKKFLRELPDPLLTFKLHRLFVTSQKVPDDETKRRILH LITGALKLYYRRLPDPIISYDAYPRFIIETDPDKKLEAFRE GALKMFFRELPEPLFTFNHFNDFVNA\KQEPRQRVAAVKD GLLKQFFRELPEPGLPADLQEALFKAQHLENEEKNTATIL VITDFLRNIPDSVLSSDMHGLWMEAVDTVHRGHKIEAIKS GLLKQFFRDLPDPLLTREHYDRFVLAAQHDDDTVRRDSHA GTLKQYLRELPEPLMTHEFYDEWIDAAKDTDPQRLQELWR

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|  | LLKSFLKELPGSLLRSELYDKWIAALDDEDAQQRTQEITK DVLKLYLRQLPEPFILFRLYKEFIDLAKEDQLVNEEQETK LAGGCKSYLREDPENLLTSELLPEFVYATKQGDLTDNLKL

 A L L
 $V L L K T H E R S L G E P V T T N E L Y N K L T D L A E K P Q V P K L E K W K F$
 GCLL K L Y
 GVLKLYFRSLEPPLFPPDLFSELLASSELEATAARVEHYR



 $S L L K L Y L R E L P E P V V P W L Q Y E D F L L C G Q A L E A D E T K G H Q E$ LL K C F L K E L P H S L L R S DL Y N R WTA AL D HE DT E Q R T L E IR K
 L L $\quad$ Y L $\quad$ R Q L
 S C F K K F L R S L P S P L VP Y D KYFE F L Q A A R ITM R E KV NA L Y H

 PHDVASVFRRYLTQMPEPVIP YNLYGKFRETDEVI KAYK Q



UniRef90_E6ZTLO UniRef90-O6CF51 UniRef90-UBJUR2 UniRef90-A7EF99
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UniRef90 UPIO0046B3134 UniRef90_UPIOOO3EC3706 UniRef90-H3AKD7 UniRef90-Q7PQD3 UniRet90_UPIO003F07B2E UniRef90_UPIO0044433A2 UniRef90-B3ML60 UniRef90-UP10003EC1B8E UniRef90_W5KJA9
UniRef90_C3ZWI3
UniRef90-JoDQG6 UniRet90-GOS834 UniRef90 BOE8Q6 UniRef90-UPIO00440CA47 UniRef90_UPIO003941E7F UniRef90-U3IIP8
UniRef90-UP10003C1AD50 UniRef90-F2RXZ1 UniRef90_U4LVT9
UniRef90 H3CHE9 UniRef90-G3NLA1 UniRef90-G5BE30 UniRef90-M7AUV4 UniRef90-F4X764 UniRef90_UPI00046C3925 UniRef90-FOXJ27
UniRef90
B3RMW8 UniRef90 UPIOOO45722FO UniRef90-UP10002B4ADD2 UniRef90-UPIo00440BC8D UniRef90 H9XVN1 UniRef90-C5DRT4 UniRef90-UP100004417F80 UniRef90-Q172Z7 UniRef90-UP10001CBB4E0 UniRef90-F4PW26 UniRef90-M4ABY2 UniRef90-D6WE39 UniRef90-v9K8F3 UniRef90-H2M9K0 UniRef90-F7B8H0 UniRef90-A7TGBO UniRef90-K0KF15 UniRef90-UP10003C8DF70 UniRef90-UPIOOO4622596 UniRef90-H2TNG1 UniRef90-T1K5Y9 UniRef90-H3F8D2 UniRef90-UPIO00395D34E UniRef90-K1R8T3

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I I WKMPKCHFDVLRRTAEHI4ARVVVEGEVNKMLAHNVIALVV VLQKLPTAHSLCLARLCTHLNRVTQHAETNLMSNKNLAMV LLAALPPVNRATLKALITHLERVQCFSGENQMNTHNLATV I NGLPDPNYATLRALTLHLNRVQESSASNRMTASNLAIV KVNELPDANYATLKFLMGHLDKVRSAERLNQMSASNLAIV LFSNLPRVNQATLRALVNHLYCVQRFADLNQMNLHNLALV TVEKLPTNHKATLAYYMHHLKFIANNQELNQMSTKNLGLV LARKLPVHNYETLKFMMDHLNRVSWFHEVNDMSTSNLSTVV

 LLEYRPPAHLETLRYLIAHLRRVTHYEKDNGMTAENLGUV KLQELKPAHYQTLKYMVNHLHRVTEHRSKNLMGSENLGVV PESRPAGTHYNTLRHLVAHLFRVAAHSQENRMSANNLGUV GLDELPTANYNTLERLVFHLVRVCKEEAHNRMSPNSLALV LLHELPVANFNLLKYICQFLNEVQAYSSTNKMSGQNLATV
LTRKLPSAHYQTLKYLMGHLRAVVEHSDDNKMETRNLALM
 LLRKLPRHHYATLRYLIFHLAEITKNSEVNKMETRNLALM LVQLLPEENRLLLKHTI AMLGCVQNHSDVNQMNSSNLAVC

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 MLSSLPACNQATLQA VTMLRLVGQNSERNKMNHSNLAAVV
 VRDFVPLDPYRLLKKTVVCLLTKVAQNSQDNLMNANNLSVV LVHKLPEKNKEMLELLVKHLANVSKHAKKNLMTVANLGVVV LLECLPKANQETMALVLNHLKKVSSHCEKNKMNVDNLAVC LVHKLPEKNREMLDTLVKHLTNVSNHSKQNLMTVANLGVV KLEELPSSNTSTLERLIFHLVKVAKEEEHNRMSADSLAIV RLLWRLPAPVLVVLRYLFTFNHLAQYSDENMMDPYNLAVC

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V

 VLEGIPRQNHATLERVEHLARVAQQEPTNRMSPSNLAVV AMKKVHYSNRATLIYLMEHLLKVASKKEENKMDFKNLAVCC LSCMLPDGVSQTLRYFFNFLKNVSQRSAKNKMDSSNLSVV LIRSMPPQNQYLLLYVLDLLSVFARKSDKNLMTASSLAIV TADVHALVHRLDENHFKMLDIMI THKSDKNLMTVSNLGVC



UniRef90_F6TSN4
UniRef90-F2UMK1
UniRef90_UPI0002B4337A UniRef90-H3DQ95 UniRef90-E1G670 UniRef90_UPI00046BA59B UniRef90_B4IKC3 UniRef90-B5RTL2 UniRef90_UPIO003F49399 UniRef90_UPI00042BDE70 UniRef90-A0A058Z8C5 UniRef90-T2MD22 UniRef90-T1J1Q0
UniRef90 L5LP90 UniRef90-M5G9U6 UniRef90-W5UDY3
UniRef90-UPIO0035A02A6 UniRef90-H3DKW4 UniRef90-HOZJW2 UniRef90-H2KQ10 UniRef90-F1A1Z1 UniRef90-L8YGU1 UniRef90-GOVA86
UniRef90-F0ZDA6
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UniRef90 H3D5X3 UniRef90-H3CZI7 UniRef90 K1PJ18 UniRef90-UPIO004406B41
UniRef90-H9KDJ4 UniRef90-V5GA20 UniRef90--I3MKK2
UniRef90-A7TMN1 UniRef90-W2RKK8 UniRef90-UPIOO03599827 UniRef90-L8IJR6 UniRef90_G3VCY8 UniRef90_V5GDJ6 UniRef90_C3ZPN6
UniRef90_G3S8A6 UniRef90-H2U551 UniRef90-UPI000180D21F UniRef90-UPIO003DOCEAA UniRef90-J9VP44 UniRef90-UPI0003890D10 UniRef90_G3RRR8 UniRef90-W5M3K8 UniRef90_UPIO003833EB0 UniRef90_B7QNY3 UniRef90 A3GFQ9 UniRef90-M3YON2 UniRef90-A8N1V4 UniRef90-W3X305 UniRef90-Q2HAD4 UniRef90-S9PSN9 UniRef90_UPIO00343FEE4 UniRef90-S9WTD4 UniRef90_G2QD01 UniRef90-_LATEP8 UniRef90-T1FWY8 UniRef90-M2N219 UniRef90_UPI000441B53F UniRef90-I1CJ27 UniRef90_C4M6Z4 UniRef90-E2R818

$\qquad$

 R V F G G L P L T L L MF K Q K S K F P IV P Y KTF GVPLEVLIEY E Q DMVPAIVRQCIVVIVTYG
$N$ K L F G I



VF GKD DGK LCEKERT $\qquad$ $T \vee P$
E A

$$
\begin{aligned}
& \text { QLFGQDDFTK }
\end{aligned}
$$

QTFGVIL L VDRFQDSEAI P LIMV N H
$F$ GES LE D D I V
G G LF GVP L E VA M
GKVYGTSLCS
$P G K V Y G T S C S H L E S C G$

F G $\mathrm{F}^{\mathrm{F}} \mathrm{P}$ L

K T QL F GQP L F KI C
LGNRTF GVPL E ELLMSRA




KTF GVVPLESLLEFEQE
K K GVF GVVLESLCERE GAESRVVPGIVVDEAISAMK QMDM LRDGVTGGSGSTLNDQALTQNNVPVIVDKCLTHMYMMGL

S RVYG V P L G I H L R E

PEP $\square$ GMF GVHLE ECTPS GSN ERRAC
$F G V R L E E C D P A T E N Q H A P L I V A A C C R D V E E A G L E$



Uninefor
Un
UniRef90_F6TSN4 UniRef90_F2UMK1 UniRef90_UPI0002B4337A UniRef90_H3DQ95 UniRef90_E1G670 UniRef90_UPIO0046BA59B UniRef90-B4IKC3 UniRef90_B5RTL2 UniRef90_UPI0003F49399 UniRef90_UPI00042BDE70 UniRef90-A0A058Z8C5 UniRef90_T2MD22 UniRef90_T1J1Q0
UniRef90_L5LP90
UniRef90-M5G9U6
UniRef90_W5UDY3

UniRef90_UPI00035A02A6 UniRef90_H3DKW4 UniRef90_H0ZJW2 UniRef90_H2KQ10 UniRef90-F1A1Z1
UniRef90_L8YGU1 UniRef90_GOVA86 UniRef90_F0ZDA6 UniRef90_UPI0002C3F754 UniRef90_E1GF63 UniRef90_K9HG25 UniRef90_UPI000395618D UniRef90_UPIO0026532DE UniRef90-H2RSW8 UniRef90_M4G8R2 UniRef90_U3KHU2 UniRef90_UPI0001FE534A UniRef90_J9K1U7 UniRef90_UPI0003F0807D UniRef90_L8H535 UniRef90_W5KN18 UniRef90_A7RUA5
UniRef90_W0TF53 UniRef90_Q55DW9 UniRef90_L8GAH2 UniRef90_H3D5X3 UniRef90-H3CZI7 UniRef90_K1PJ18 UniRef90_UPI0004406B41 UniRef90_H9KDJ4 UniRef90_V5GA20 UniRef90_I3MKK2 UniRef90-A7TMN1
UniRef90- W2RKK8 UniRef90_UPI0003599827 UniRef90-L8IJR6 UniRef90_G3VCY8 UniRef90_V5GDJ6 UniRef90_C3ZPN6 UniRef90_G3S8A6 UniRef90_H2U551 UniRef90_UPIO00180D21F UniRef90_UPI0003D0CEAA
UniRef90_J9VP44 UniRef90_UPIO003890D10 UniRef90_G3RRR8 UniRef90_W5M3K8 UniRef90_UPIO003833EB0 UniRef90_B7QNY3 UniRef90-A3GFQ9 UniRef90-M3YON2 UniRef90-A8N1V4 UniRef90_W3X305 UniRef90_Q2HAD4 UniRef90_S9PSN9 UniRef90_UPIO00343FEE4 UniRef90_S9WTD4 UniRef90_G2QD01 UniRef90_I2GY30 UniRef90_H2TEP8
UniRef90_T1FWY8 UniRef90_M2N219 UniRef90_UPI000441B53F UniRef90_I1CJ27 UniRef90_C4M6Z4 UniRef90_E2R818 UniRef90_H3BXW5
UniRef90_UPI0003DEC699 UniRef90_G8JQ72 UniRef90-UPIO002C3DC31 UniRef90-F4QEQ0 UniRef90-W5JTV2 UniRef90_W4WC45 UniRef90_H8WZL6
UniRef90_U9U4X1

## A

## ,

 KLYFR GMDQALFPKDVFHDLISCV SMMEGTDQKIDABRE
 $N V L K L Y L$ RQFPFRLYNELMGLAKESGQDQVVLSLVLKLRE $G V L K Q F F R E L A Q P L L T S E L Y P A F D A T K R F D P H T I R P R V L Q$


GALKSYLRELPEPLMTSELYNDWFKAAGEKELR DKLE LDR


 $\left.\begin{array}{ll|l|l|llllllllllllllllllllll|llllll}P & E & P & I & V & P & L & D & L & Y & D & R & F & R & A & P & L & R & S & V & M & G & Q & E & V & V & S & P & E & D & T & N\end{array}\right)$

## V <br> V

## A

 GSAALRKS Y R R R E L P S E P L L M T F D L Y



 A S V L K Q Y L R E L P E P V F NLLP HA E RVVKY S K H R E S H I N S N F S A S L L KLLWY RELE EPVIP QQFYKECI SNYENPAAAV









S ALLK R F L R D L P D G L F T R A Q R LLA WLLD S E I E D E E E K V S R YR E S A L K F Y L L R S L S E P L M T Y S L L H T D D L M CAA A K S E N D F R L S E I H A






## UniRef90_F6TSN4 UniRef90_F2UMK1 UniRef90_UPI0002B4337A UniRef90_H3DQ95 UniRef90_E1G670 UniRef90_UPI00046BA59B UniRef90-B4IKC3 UniRef90_B5RTL2 UniRef90_UPI0003F49399 UniRef90_UPI00042BDE7C UniRef90_A0A058Z8C5 UniRef90-T2MD22

 UniRef90_T1J1Q0UniRef90_L5LP90
UniRef90_M5G9U6
UniRef90_W5IOY3
UniRef90_UPI00035A02A6
UniRef90_H3DKW4
UniRef90-H0ZJW2 UniRef90_H2KQ10
UniRef90-F1A1Z1
UniRef90_L8YGU1
UniRef90_GOVA86
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UniRef90_E1GF63 UniRef90_K9HG25 UniRef90_UPI000395618D UniRef90_UPI00026532DE UniRef90-H2RSW8 UniRef90-M4G8R2 UniRef90-U3KHU2 UniRef90_UPI0001FE534A UniRef90_J9K1U7
UniRef90_UPI0003F0807D UniRef90_L8H535 UniRef90-W5KN18 UniRef90-A7RUA5
UniRef90-W0TF53
UniRef90_Q55DW9 UniRef90_L8GAH2 UniRef90_H3D5X3 UniRef90-H3CZI7 UniRef90_UPIO004406B41 UniRef90_H9KDJ4 UniRef90_V5GA20 UniRef90_I3MKK2 UniRef90-A7TMN1
UniRef90- W2RKK8 UniRef90_UPI0003599827 UniRef90_L8IJR6 UniRef90-G3VCY8 UniRef90_V5GDJ6 UniRef90_C3ZPN6 UniRef90_G3S8A6 UniRef90_H2U551 UniRef90_UPI000180D21F UniRef90_UPI0003D0CEAA UniRef90_J9VP44 UniRef90_UPI0003890D10 UniRef90_G3RRR8 UniRef90_W5M3K8 UniRef90_UPIO003833EB0 UniRef90_B7QNY3 UniRef90_A3GFQ9
UniRef90_M3Y0N2 UniRef90_Q1RLE3 UniRef90_A8N1V4 UniRef90-W3X305 UniRef90_Q2HAD4 UniRef90_S9PSN9 UniRef90_UPIO00343FEE4 UniRef90_S9WTD4 UniRef90_G2QD01 UniRef90_I2GY30 UniRef90_H2TEP8
UniRef90_T1FWY8 UniRef90_M2N219 UniRef90_UPI000441B53F UniRef90-I1CJ27 UniRef90_C4M6Z4 UniRef90_E2R818
UniRef90-H3BXW5 UniRef90_H3BXW5
UniRef90_UPI0003DEC699 UniRef90_G8JQ72
 $V$ HERLPPANRRVLEVLMPFLYEVAQHEADNKMGTSNLALV









 TCS RL P Q D S Y N NL R Y L I K F L A K L A E H Q EVVNKMTPSNI A I V

 FVVT E I P E P N G F DIF K Y L M F F L T K V V E K S D I N K M VA G N I A I V L M K K L P A R N LLD A L Q F L L L H L K K R V TTWF E M D N L M TAA S N L G A V









 V A DKL P GPNKALL KHLI CVFH HI LESAAETNKMDARNLAVC L R L E L Q G L GEVHYNLLRYLIRFLVVVAQYERTNK




\section*{L

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 L I R D L P G H Y Y E T L K F L V G H L K T I A D H S E K N K I E P R N L A L V





 L R S KI R RLP S V H Q R AL I E HL S RVV A R S EK N K M D P K NV A I V


 R M H K L L R Q L P P A H Y K T L Q F L I E H L Y R V T E H S A E N K M T A S N L GI I











## UniRef90 V9KA89 UniRef90-A8XLE1 UniRef90 - U5EKP7 UniRef90- E3KV65 UniRef90-M2MQF5 UniRef90-UP1000273B6CC UniRef90-H3BYF1 UniRef90-UPIO003C48D9D UniRef90-L5M912 UniRef90-V8NKM9 UniRef90-UPIO0042ABD37

 UniRef90-K7FTB6 UniReffo-J3NBH2 2 UniRef90-W5UL19 UniRef90-F1QKC5 UniRef90-UPIO0045612CB UniRef90_UPIo0044164D0 UniRef90-W4VRB6 UniRef90-L8H487 UniRef90-K2GBR1 UniRef90-T1HCLO UniRef90- W8BBL4 4UniRef90 G3NFE2 UniRef90-G3NFE2
UniRef90 FoZXUO UniRef90-UPIO0046B91EF UniRef90-UPIOOO359FEO4 UniRef90-UPIO0042BC892 UniRe990_MOTO51 UniRef90-Q10164
UniRef90-F1KVL8 UniRef90-F4PAQ 7 UniRef90-G3W5Z6 UniRef90-12H3Q5 UniRef90-I3JQM5 UniRef90-MOSBB9
UniRef90 E9HAX7 UniRef90-UPI000333A1A1 UniRef90-UPIOOO3C18FEC UniRef90-F6SVT0 UniRef90 W5JZF8 UniRef90-G3PXL4 UniRef90-T1HU56 UniRef90-B1AUY2 UniRef90 UPIIOOO395AD81 UniRef90-T1PPN4 UniRef90-UP10001CBA8D7 UniRef90-UP10003CO2A38
UniRef90-UPIOOO2B48ACD UniRef90_UP10002B48ACD
UniRef90_S9VTV5
UniRef90- G3PI89 UniRef90-GOMND7 UniRef90- BGJVYG
UniRef90
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UniRef90 A9ULL UniRef90-A9UQL1
UniRef90
M5FUP1 UniRef90 13 KHV 1 UniReffo-O4SE38 UniRef90_K2GD91
UniRef9O_H8WVF8 UniRef90-11FZG2 UniRef90-UPIo004575F65 UniRef90-V8PID0 UniRef90-G3Q6M7 UniRef90-UP10002BD12C3 UniRef90-UPIO00359B5C8 UniRef90-L5L367 UniRef9O-UPIOO033AF4439 UniRef90-G3QBBO UniRef90_UPIO0004572855 UniRei90 U3IKB6 UniRef90-W5UF744 UniRef90-D4AA19 UniRer90 UPIo003315CBF UniRef90_A2AL19
UniRef90
UniRef90_UPIO002C3DAC9


## UniRef90 V9KA89

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UniRef90 F1KVL8 UniRef90-F4PAQ7 UniRef90-G3W5Z6 UniRef90-12H3Q5 UniRef90-H3D050 UniRef90_13JQM5 UniRef90_MOSBB9
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UniRef90 S9VTV5 UniRef90-G3PI89 UniRef90_G0MND7 UniRef90-B6JVY6 UniRef90-D5G6U0 UniRef90-H2M583 UniRef90_U4US07 UniRef90-B6K6W2 UniRef90_UPIO0042AE42F UniRef90-M5EBR3
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UniRef90-K2GD91
UniRef90-H8WVF8
UniRef90-I1FZG2
UniRef90 UPI0004
UniRef90-UPIO004575F65
UniRef90_V8PID0
UniRef90-G3Q6M7
UniRef90-UPI0002BD12C3
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UniRef90-W5UF74
UniRef90-D4AA19
UniRef90_UPI0003315CBF
UniRef90_A2AL19
UniRef90_UPI0002



120

 DND AGAMKLWFRELPEPLLTWNLYASFIEAGRIENNRLR DAFKDFLRSDPLKLLSSDLFEEWMTAGEKPNEEDKIESGKQ



 GALK S Y L R ELPQPLMTFELYEDWFKVACFKDEGRLQSLQD
 DLLKQYFRDLPEPTLTSKLTHTFLHIYQFVPQQQRLQAVQ
 VASLLK L Y Y REL PEPVFRFSLQDRDQHSEDLDDHVANHFV SYLRDLPEALFTDLYYQRLFETYTKFSNDNEQDRIEALQK
 SPHDLTNVLKRLLREELPQPRFLNTFYQTHAMPECGRALNL



 KAWFRELPRGVLDSLTPDQVM HCNTEEVCSE


 AVITGVLKDYLRELPYPLIVKKQLYEATALESMAARPKRMLGAS KNLVQVAWFRELDRMGLLDS LS SEQVMQCQTEEACDH

 NVLKLYLRQLPEPLILYRYYNEFDAPSLSMEAKNRVVKMRD
 LLKEFLRSLPDPLLCAGLYPRWRAALDAPNVHQRMLDRLKTV GMLK CVAKLYFRELPEPLFTDNLYNNFVEGLALSDPSAREKCMM VI TGILLKDYL RELPTPLITQPLYQVVLEAMARGPPSRAPS $D V L K R F F R E L E D P I F T L E L H P Q W K E A A E D S K P Q R D E R Y K E$
$D L L K S F F R E L S E P L I P N Q H Y N D F I E G N V D D E A R R R D A V H R$

 FKLLMRELPDKA LGDEALYELRNITSDITDDDQRALAFRE V TGGVLKDYLRELPFPLI NK PLLYEAVLESMATKPLKMGAA $N L L K E Y L R E L P D P L L C R D L Y H A F I Q T Q R I R N R R L Q L E A L Q Q$
$R Q F L K S L P E R V I D P S H Y F A F R Q V M L L T G T S D E N K I L M L E R ~$

 TSVGKL WLRDDLPEPLVPFAFYDALAERVTQHEERVRLI RK | $V F K D F L R S D P Q K L L S C D L F E E W M E A L E K Q N E E D R D E A L K L$ |
| :--- |
| $S L M K L Y L$ |
| $S A L K Q Y L R H L S E P E L P E P V L T A E L M P K F E Q A S A Q K N V K L K$ |

 $D M V K Q F F R D L P E P L L S S K L S E T F L$ K Q WF R DLLP E S I LPPA T L L K D F E Q A L K DIE D Y N A R M F R I Q
 A VIIK D Y L R L L P P N P L I P Y N L Y E E F I I E L R N N H C G H Q F V I N L P










 |  | $G$ | $L$ | $L$ | $K$ | $F$ | $F$ | $R$ | $E$ | $L$ | $E$ | $P$ | $V$ | $L$ | $P$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |$A B$



UniRef90_V9KA89 UniRef90-A8XLE1 UniRef90_U5EKP7 UniRef90_E3KV65
UniRef90_M2MQF5 UniRef90-UPIO00273B6CC UniRef90-H3BYF1 UniRef90-G1NEI7 UniRef90_UPI0003C48D9D UniRef90-L5M912 UniRef90_V8NKM9 UniRef90-UPI00042ABD37 UniRef90-K7FTB6 UniRef90-J3NBH2 UniRef90-G3AXX7 UniRef90_W5UL19
UniRef90_F1QKC5 UniRef90_UPIO0045612CB UniRef90_UPI00044164D0 UniRef90-W4VRB6 UniRef90-L8H487 UniRef90-K2GBR1 UniRef90-T1HCL0 UniRef90-W8BBL4 UniRef90-G3NFE2
UniRef90 F0ZXU0 UniRef90_UPI00046B91EF UniRef90_UPI000359FE04 UniRef90_UPI00042BC892 UniRef90_MOT051 UniRef90_Q10164 UniRef90-F1KVL8 UniRef90-F4PAQ7 UniRef90-G3W5Z6 UniRef90-12H3Q5 UniRef90-H3D050 UniRef90_13JQM5 UniRef90-MOSBB9
UniRef90-E9HAX7 UniRef90_UPI000333A1A1 UniRef90-UPI0003C18FEC UniRef90-F6SVTO UniRef90-W5JZF8 UniRef90-R9AN23 UniRef90-G3PXL4 UniRef90-T1HU56
UniRef90-B1AUY2
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UniRef90_S9VTV5
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LVYKLPDKNREMLELLIRHLVNVCEHSRENLMSPSNMGVI

LMN
TCSRLPKDNYNNLRYLDRFLAKLAEHQEVNKMTPSN:AGV
VAKCLPPAESALLDWAVNLMADVVQEEQLNKMNARN|AMV|
CAVFLLPDENREVLQTLLYFLSDISTAEENQMTAHTLAVC
ALKELPESHFRTLEYGTKHLAYLATLSHQTNMHARNLALV
LLRSKIRRLDAVHQATLRHLNRVVARSEKNKMDAKNLALV

MKEHMKPMYFKLADFLDHVIKKTVENENVTGMNVHAMSVC
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LGLPHDNKLVLCYLIRFLQVFAQSANVTITKMDVNNLAMV
LVSSLPVCNQTLLKNVLNICSVVNQHKDVTKMDLNNLSVV
VLEHLPEANHNSLERLIFHLVKVALLEDVNRMSPGALAAVII

AVLLLADESREVLQTLLCFLSDVVNSVEENQMTPMNLAVC

LLQKLPPQNFDTLQFLLLHENRVTWFEVDNLMTASNLGAV
LIMLLPDANRDTAKAFLIFLKKVVANEGKNKMSLWNVSMI
LIMLLPDANRDTAKAFLIFLKKVVANEGKNKMSLWNVSMI
LNLLVLLLPEASRDTLKEFFQRVDDHQAENKMTGNNVSVI
GCENDQTDSEHTVRKLLDHLKLVASYQEMNKMTCQNLAVC
DTRLLPPTEAALLDWAI NLMADVAQEEQQNKMNAHNVATV
VIDKLPESRWNNLRYLIKFFHELSRRHEHNKMTSQNLAAV
LLRSLPDPNLTVFLFLLEHLKRVAEKEPLNKMSLDHNLATV

$\stackrel{L}{V}$
KVQLPGANQCLLDYVLDLLAVFDRKSRENKMNAFNLAVI
VLEELPKVNRVLLCHVLCVLHHVGRRSCTNKMSPTNLGVV


\section*{| S |
| :--- |
| S |
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$M L \operatorname{L}$ Y C L L









 D L V V V GL P R A N F L C C L R GA E H LLY K V T D Y E D Q N Q M H A D N L A T V

 QLT YCLLPRDHRNLLEEVLLYFFSWDKDTGSKMDAHNLATV

 V L E S ACP P P N R H T F L L Y



 $\operatorname{LL} L$ S S C L




|  |  |
| :---: | :---: |
| $\begin{aligned} & \text { UniRef90_V9KAB9 } \\ & \text { UniRe90_A8LE1 } \end{aligned}$ | APNLIMFKSGLMELSMAAGTSNLMRYLIKYQDLLW |
| UniRef90－U5EKP7 | GPTLMRAAEETAAILDTKFNNVVIEILIENYEKIF |
| UniRef90－E3KV65 | GPTLLSPPSGNNALQDMSVQCKVVETLLEHYREDF |
| UniRef90 M2MQF5 | QPGLLSHPHHDMAPQEYRLSQDVLIFLIENQDSFP |
| UniRef90－UP1000273B6CC |  |
| UniRef90－G1N | FGPTLMRAQEDTVAMMNDKFQNIVVETLIEHFGKIY |
| UniRef90－UPIo003C48D9D | FGPTLMRPRPTEATISDYPHQARITEALI DFYATIF |
| UniRef90－L5M912 | VGPNMLRENDQNLSLEAQKELNNLVEFLI DNCLEI F |
| UniRef90－V8N | SLFQTNGKG |
| Un | CILCPSSGNSRLTDTKKISLVRFLIENYPKIF |
| UniRef90－K7FTE | IQVVGLVEALI Q A A TLF |
| UniRef90－J3NBH2 | MTQMADPGTALLMYAVQVMNFLKMLI Q |
| UniRef90－G3AXX7 | NILYSKNGSEQASDYFLADEVVNQLI EMHEEL |
| UniRef90 W5UL19 | LAPSL L AKPDHKDLSENMAATECLSHMITECKKLF |
| UniRef90－FURKC | WQPGMISHPSHFQSPVEHKISVEVLEFLI QHQDQF |
| UniRef90－UPIo | TVIFGPKQSADLLAVQSYKDSMMEDLIEHASADY |
| UniRef90 W4VR | FGPTLLRPGPQNSKQKDLLES |
| UniRet90－L8H487 |  |
| UniRef9 |  |
| UniRet90－W8BBL4 | MSPNMLWPRDYVGQVNSTSAVNVIVELLI SQWDYFF |
| UniRet90－G3NFE2 | NCLRCQDPRVIFENTRKEMSFIIVLI QRLLDTSF |
|  | LES |
| UniRef90 UPIO0046 | RCPDNSDPLTSMKDVLK T TVVSH WEF |
|  | LWSKNAPNMLTT GTLSAL |
| UniRef90－UPIOOO4 UniRef90－M0T051 | APSLFHGKPDQKDLSENLAAAQGL |
| UniRef90＿MOTO51 UniRef90 1010164 |  |
| UniRef90－F1KVL8 |  |
|  | NFLRCPNPATDFENTKFEQAFL |
|  | PNLFGKRSNQEEMQAAATTAH\｜VRLLIRYQD\｜LW |
| UniRef90－12H305 | NNMQVLLDVTEQAF |
| UniRe990－ 3 D050 | ， |
| UniRef90＿3JOM5 |  |
| UniRet90＿MOSBB9 | MTKVADPLLALMMVVQV |
| UniRet90＿E91 | WSPVNS |
| UniF | P NMLAPDSGSLSLEAQRKVKTLVEFLID HCFQVF |
| UniRef90＿UP10003 |  |
|  |  |
| UniRef90 W5JZF88 | FGPTLKPRQTEAEVSDYPYQALLMVEIFITHLLATIJF |
| UniRef90－G3PXL4 | PCVLRSPDPFLGMKDVSKTTMCV |
| UniRef90－T1HU56 | VGPSLLWS DSVTPADLRAVPLLVETLIAHCEY的 |
| UniRef90 B1AU |  |
|  | PTMMQNHQSQEEMVYSQKEADVFADLI TGYKNDF |
| UniRef90－UPIO001CBA8D7 |  |
|  |  |
| UniRet90＿UPIOOO28 | FAPSLIGTDGKG EHEVKIVMEDLI DNYVSIIF |
| UniRef90 S9VTV5 | WGPTLLK QAT】PE】SSFSR |
|  | APNI FMFKTEQQEFSMATSTANTVRLLIRYQNLLW |
| UniRef90－GOMND7 | FAPSILRHDKLQETLAENELQVTIVETMISNVEEIF |
|  | SK GEM |
| 5G | P G S |
| iRe990＿－ 2 M 583 |  |
| UniRet90＿U4US07 | SQ |
| UniF | CSHPSHDNDPEEYFASQELL |
| UniRef90－UP100042AE42F |  |
| UniRef90－UPIo004443A99 | SVLRVQDRGLSLQAQKKVKTLVEFLI |
| UniRef90－R7UMH2 | LSPT |
| UniRet90＿W5JR | FGPTLLRAAEETVA【LD【KFNNVVIE！LIENYDKUF |
| 90－F1RSR5 |  |
| UniRet90－UP1000 | DITANFEATW |
| UniRet90＿UP | R V V EDL I S |
| niRef90－E9C606 | TLLRAENPSAEDGDSGSQNQVV |
| UniRef90－A9UQL1 |  |
| UniRet90－M5FUP1 | G VKQC【LQYHW】F |
| UniRef90＿3KHV1 |  |
| UniRef90－Q4SE38 |  |
|  | I T L SI SRKPPSSSDLE HLDCYAHESVEYLLENFDEIF |
| UniRef90 H8WVF8 |  |
| UniRef90－11FZG2 |  |
| UniRef90－UP1000457 | NLLQERDYSAEAEESSAVITVLQRLI ENHNSFF |
| UniRet90－G306M7 | F |
| UniRef90－UPI0002BD12C3 | GPTLLRPRPTEATVSDYPHQACTLET\TTK |
| UniRef9－UP1000359B5C8 | GPTVVQEPAPMQUMDETQKQNRVMERLLD ${ }^{\text {d }}$ |
| UniRef90－UPIo003AF4439 |  |
| ef90 ${ }^{-}$G30BB0 |  |
| UniRef90－UPIO004572855 | SKKSKT |
| UniRef90－U3IKBE |  |
| UniRet90－W5UF74 |  |
| Uni | MAPSILCLPSSCSSANDUSNEVSLIKFLI GNSLKI F |
| UniRet90－UP10003315CBF | FGSA |
| niRef90＿UPIO002C3DAC9 | FGPSLIYTDISNTSEKELNEFNVVIKRILIENYG |




## UniRef90 F7CA94 UniRef90_UPI000333D3B4

 UniRef90_I1BTF0 UniRef90_A0A059DKC9 UniRef90_UPI00022F5F85 UniRef90_M3J8D2 UniRef90_S8BVI6 UniRef90_D6WE23 UniRef90_H3B2X0 UniRef90-N1QIC4 UniRef90_A0A022REK8 UniRef90 T1KJS3 UniRef90_C5GQZ2 UniRef90_F2TYP6 UniRef90-B7PS77 UniRef90-UPI00042B87D2 UniRef90_A0A026WPE4 UniRef90_F4PV01 UniRef90_G0MV85 UniRef90_I1GE86 UniRef90-H9JIH7 UniRef90_W5KMQ0 UniRef90 U3JPI0 UniRef90_G3AUP8 UniRef90_Q0CDU3 UniRef90-A9UXG0 UniRef90_C7YKP9 UniRef90_D2A1J4 UniRef90_L5KW44 UniRef90_B4GL97 UniRef90_E9HC91UniRef90 Q9H0H5 UniRef90_UPI0002A487C9 UniRef90_H2AUV8 UniRef90_G3Y448 UniRef90-H2XWU5 UniRef90_UPI0002C3D5B7 UniRef90_U1HHZ2 UniRef90_W7IDE5 UniRef90-W4K0G3 UniRef90_F5GZA8 UniRef90_B6Q4Y0 UniRef90_UPI0003BB9C56 UniRef90_W9C4A1
UniRef90 T2M719 UniRef90_UPI0003958ABC UniRef90_Q4SFL3 UniRef90_B0E7Q6
UniRef90-S4RTW1 UniRef90_Q2QPD6 UniRef90_UPI0003D0FC99 UniRef90_UPI0003AF07D1 UniRef90_F7B4B8
UniRef90_T1E8R2
UniRef90_UPI0003D0FF49 UniRef90_G3NIW8 UniRef90_A2EQ22 UniRef90_F0ZCT3 UniRef90_UPI0003DE9560 UniRef90_D2A5Z2 UniRef90_B3L3K3 UniRef90_J9JV59 UniRef90_UPI0002064671 UniRef90_L5K522 UniRef90-C1G7W8 UniRef90_U3FBI8 UniRef90-N1JEV2 UniRef90-S9RDK2 UniRef90_S8EEU6 UniRef90_K1PZ72 UniRef90-H9KMJ6 UniRef90-Q54WY8 UniRef90_B2AXJ7
UniRef90_Q17FX7 UniRef90-W7KFG0 UniRef90_P40809 UniRef90-V5HZ60 UniRef90_S9XDC6
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UniRef90_UPI0002C3D4A4 UniRef90_H3C726 UniRef90_X1Y4U4 UniRef90_W5K2K3
UniRef90_G3V905

VF K DF $\square$ R N ${ }^{90}$
110
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 SVVLK S F L S DI D D A L LTT K ELLYP Y WVV T LIDIDQDEKERT EK Y R


 A L L K E F L R D M P D P L L T K E L Y T A F I N T L L L E P E E QL Q S A L Q DAAN ILRRRYFNQLPEP IIPDLEFYHRFRDPLRNHQAQAVGA K A WF REL ATDFFS K R L P QL DPSY LMDELLTDVVSRDPDRKERDIDALQE NVLKLYPDSLVSSQVYEIVRTVYTTASEAPAEGRVVVLQS | $L L$ | $Y$ | $R$ | $G L$ | $D$ | $E$ | $P$ | $L$ | $L$ | $T$ | $F$ | $D$ | $L$ | $Y$ | $P$ | $V$ | $F$ | $A$ | $V$ | $A$ | $V$ | $K$ | $D$ | $E$ | $K$ | $N$ |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | AL A K Y Y $\square$ A S L P E P L T T F E LY N E T L L L K E Y F R R D L L P D P L L C C R D L Y Q A F V H T Q K I R N R R R L Q Q E A L Q





 | $S$ | $V$ | $L$ | $K$ | $R$ | $Y$ | $L$ | $N$ | $N$ | $I$ | $T$ | $E$ | $P$ | $I$ | $I$ | $T$ | $S$ | $D$ | $L$ | $Y$ | $H$ | $D$ | $F$ | $R$ | $R$ | $V$ | $S$ | $C$ | $S$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $P$ | $R$ | $E$ | $R$ | $R$ | $L$ | $S$ | $E$ | $L$ | $R$ | $T$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $P$ | $E$ | $P$ | $I$ | $V$ | $P$ | $L$ | $E$ | $F$ | $Y$ | $E$ | $R$ | $F$ | $R$ | $E$ | $P$ | $L$ | $R$ | $T$ | $Y$ | $Q$ | $K$ | $Q$ | $V$ | $Q$ | $S$ | $T$ | $G$ | $F$ |
| $D$ | $H$ | $A$ | $K$ | $A$ | $V$ | $A$ | $A$ | $Y$ | $Q$ | $Q$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |







 D MVVK Q Y F R R E






 $D M L K Q Y F R D L P E P M F T S K L A D T F L Q Y Q Y V P K E Q Q L Q A L Q A$ KAWFRELPEGVLDSLSPEQVLQCNSEGEFLELVTLLRPTQQ



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 F K L F L L D T Q K H GL L G K DA F T R L Y H L K T V S A S D K A D R S V L F K


 AV A S L L K L Y L R E L P T T I L T M Q L H L Q F V A V T EVVS DI N D RI S





 GALK S Y L R E L P E P L MT F DLLY D D WMR A A S KEP GARRLEALLQE
 D ML K Q Y F R DL P E P L MT H KL S ETFF LQ Y Q Y V P K D QR L Q A DQ A

 VIVT G V L K K D Y L R E L P E P LiF T K C L F Q M C L P D D P E G N A K L I F S



## UniRef90 F7CA94 UniRef90-_UPI000333D3B4 UniRef90_I1BTF0 UniRef90_A0A059DKC9

 UniRef90_UPI00022F5F85 UniRef90-M3J8D2 UniRef90_S8BVI6 UniRef90_D6WE23 UniRef90_H3B2X0 UniRef90-N1QIC4 UniRef90_A0A022REK8 UniRef90 T1KJS3 UniRef90_C5GQZ2 UniRef90_F2TYP6 UniRef90-B7PS77 UniRef90-UPI00042B87D2 UniRef90_A0A026WPE4 UniRef90_F4PV01 UniRef90_G0MV85 UniRef90_I1GE86 UniRef90_H9JIH7 UniRef90_W5KMQ0 UniRef90 U3JPI0 UniRef90_G3AUP8 UniRef90_Q0CDU3 UniRef90_A9UXG0 UniRef90_C7YKP9 UniRef90_D2A1J4 UniRef90_L5KW44 UniRef90_B4GL97UniRef90_E9HC91 UniRef90_Q9H0H5 UniRef90_H2AUV8 UniRef90_G3Y448 UniRef90_H2XWU5 UniRef90_UPIO002C3D5B7 UniRef90_U1HHZ2 UniRef90-W7IDE5 UniRef90-W4K0G3 UniRef90_F5GZA8 UniRef90_B6Q4Y0 UniRef90_UPI0003BB9C56 UniRef90_W9C4A1
UniRef90 T2M7I9 UniRef90_UPIO003958ABC UniRef90_Q4SFL3 UniRef90-B0E7Q6 UniRef90-S4RTW1 UniRef90_UPI0003D0FC99 UniRef90_UPI0003AF07D1 UniRef90_F7B4B8 UniRef90-T1E8R2 UniRef90-UPI0003D0FF49 UniRef90_G3NIW8 UniRef90_A2EQ22 UniRef90_F0ZCT3 UniRef90_UPI0003DE9560 UniRef90-D2A5Z2 UniRef90_B3L3K3 UniRef90_J9JV59 UniRef90_UPIO002064671 UniRef90_L5K522 UniRef90-C1G7W8 UniRef90_U3FBI8 UniRef90_Q5TG30 UniRef90-N1JEV2 UniRef90_S9RDK2
UniRef90_S8EEU6 UniRef90_K1PZ72 UniRef90-H9KMJ6 UniRef90-Q54WY8 UniRef90_B2AXJ7 UniRef90_W7KFG0 UniRef90_P40809 UniRef90_V5HZ60 UniRef90-S9XDC6 UniRef90_W4Y2B7 UniRef90-I3KSL0 UniRef90_D6W7C8 UniRef90-D3BNW1 UniRef90_B4LPF0 UniRef90_E0VGW8 UniRef90_UPI0002C3D4A4 UniRef90-H3C726 UniRef90-X1Y4U4 UniRef90_W5K2K3
UniRef90_G3V905


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 VI N K L P H ANN N TLL K M I V Q H L Q L I N S F R DV N K M G Y K N L S V V






L LLLDDKLP P A N A A LLLL


 MLNKLKPVNFDVLKF KFHEFVKVAENCKHNSMGVSNGSMV



 I V N QL V H Q LIP Q E N Y Y M L


 L L S A A L P K E N Y D L L Q Q I L L K F L






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| $L$ |  |  |
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| $L$ | $L$ | $L$ |



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| :---: | :---: |
| UniRef90_F7CA94 <br> UniRef90 UPI000333D3B4 | IA P S L L WP P TPS IE S E FTRKLCSLKVMLLPENCIKL |
| UniRef90-I1BTF0 | FAPNFLRCPSESLTFKNSKYEQAFLRTLI N |
| UniRef90-A0A059DKC9 | MAPVLMWQKDPTVADSDPAATTEVVQNLIEHHNAT |
| UniRef90_UPI00022F5F85 | FSSCLFQTKGQTSE EVNVIEDLI NNYV |
| UniRef90-M3J8D2 | FAPTLARDEYGDREMTDMGFRNDTTELLLSEFNSIF |
| UniRef90-S8BVI6 | F APNMTQMSDPDTALMHAVQVMNLLK T |
| UniRef90-D6WE2 | FGPTLVGNPNPNNLLDE\\|VQHNMVM |
| UniRef90-H3B2X0 | F GPNLLHKQKSTDKAEESTAl\TVLQKMI ENYETLF |
| UniRef90-N1QIC4 | FQPGILSHPQHDMAPLEYRLSQDVLIFLIENQDSF |
| UniRef90-A0A022REK8 | FAPNMTQMSDPLTALMHAVQVMNFLK |
| UniRef90-T1KJS3 | WWP TLLPFENDMLMFERMRHLEESVQTMIDQFEYTF |
| UniRef90-C5GQZ2 | L A PCILRPRLENNLTMDERHSYRLLRDLFDHKDEIF |
| UniRef90-F2TYP6 | GPSIMWPRQQ SIS A $\square$ AVS C KVAE |
| UniRef90-B7PS77 | MAPNCLRCDDPRVIFDNTRKEMAFVRTLIQTLDTSF |
| UniRef90_UPI00042B87D2 |  |
| UniRef90-A0A026WPE4 | FAPNILHCVKPSQLRSEVSAVINVVRALLEHTSTLF |
| UniRef90-F4PV01 | LAPNILYPQK LDMGSISNSNGTVDFMIKNYKLLF |
| UniRef90-G0MV85 | FGPNLTWPT DQEVPDSQLNNLNNFCYKLIVDYDSVF |
| UniRef90-11GE86 | F GP TLFLHK T L D DVMEVLPKVTSLLEYMI I H NVEI F |
| UniRef90-H9JIH7 | APNILHEPASVEQLSERTDVINVVRLLVERQSELW |
| UniRef90-W5KMQ0 | FAPNLLHCGDGTEKMSTLK LQAAVVQCLI DNAEDL |
| UniRef90-U3JPI0 | F GPNLLHKQQSSARAEESTAIIAVVQKMIENYETLF |
| UniRef90-G3AUP8 | FAPTLAR NNREDMDLSIESTLFLFNKSQEIF |
| UniRef90-Q0CDU3 | FQPGLLSHPQHDMSPDEYKLSQDVLIFLIENQDHF |
| UniRef90-A9UXG0 | VGPSILWPPRPEDVLKN DVPKLIEFVLDHFVEVF |
| UniRef90-C7YKP9 | L NiP AP VEAMFLQNYEGI F |
| UniRef90-D2A1J4 |  |
| UniRef90-L5KW44 | L APSIFH |
| UniRef90_B4GL97 | M S P N ML WP R $\square$ D K S SVN S S S A A I V ELLIS Q WD Y FF |
| UniRef90-E9HC91 | WWPTLLPFEFTDM\RFEMPHLEDTVQAMI DQFPFLF |
| UniRef90-Q9H0H5 | FGPTIVAHPDPVTMLQD\KRQPKVVERLL |
| UniRef90_UPI0002A487C9 | APNLLHFGEGAEKMNALRLQAAIVQCFI |
| UniRef90-H2AUV8 | FAPGLI RDLTGEKD\\| I D MKERNYVVAFIFENYKRLF |
| UniRef90_G3Y448 | F Q P G L |
| UniRef90_G4LW97 | F A P S |
| UniRef90_H2XWU5 |  |
| UniRef90-UPIO002C3D5B7 | LGPCIYWSEVTNVADTKAKNVNAFFTY L L D N A E Q L |
| UniRef90-U1HHZ2 | MAPNVLYTSAKNPTVDDSFLADEAVNQ |
| UniRef90_W7IDE5 | FGMGMANDGSGTMGFSDFGYFQQMVRHWI |
| UniRef90_W4K0G3 |  |
| UniRef90_F5GZA8 | LGPNL |
| UniRef90-B6Q4Y0 | F QPGLLSHPTHDMAPLEYRLSQDVLIFLIENQDHF |
| UniRef90-UPI0003BB9C56 |  |
| UniRef90-W9C4A1 | NITYT NAKSPVDDN |
| UniRef90-T2M719 | FGPILL SKGNTVDQALLNQEYSVLSD\\|LTYFQWLF |
| UniRef90_UPIO003958ABC | FGPVLLPPH |
| UniRef90_Q4SFL3 | WAPNLVSADNGDMAFQAVR\\|QQSVVEFILNHTEQ\} |
| UniRef90-B0E7Q6 |  |
| UniRef90-S4RTW1 | LAPSL |
| UniRef90-Q2QPD6 | FAPNMTQMSDPLTADMHAVQVMNFLK |
| UniRef90-UPI0003D |  |
| UniRef90-UPI0003AF07D1 | LGPNLL WPQAEGNIT EMMTTVSLIVEPII QHADWFF |
| UniRef90-F7B4B8 | MAPNCLRCEDPR】IFENTRKEMSYI R TLVQHLDT |
| UniRef90-T1E8R2 | MSPNLLWSPNENENYMDQATVNTIVEALVADWSFFF |
| UniRef90-UPI0003D0FF49 | LSPT |
| UniRef90-G3NIW8 | $\bar{F}$ GPNLLHKQKNSDKAEESSAVISVVQRMINTYDNLF |
| UniRef90-A2EQ22 |  |
| UniRef90-FOZCT3 | FAPTIL RCPDPNVMLNNVNNERLFVENLI K |
| UniRef90-UPI0003DE9560 |  |
| UniRef90-D2A5Z2 | WGPTLITPSSCSDLVAQTTGFTKVTEQLLCYYKE |
| UniRef90-B3L3K3 | F APTFFRPSVPNAVFSQITLANRCLQMI I ESPD L L |
| UniRef90-J9JV59 | FAPNILHKP L K ELS S NDLRLATDVVTALLIVNYEYL |
| UniRef90-UPI0002064671 | $\square \mathrm{DPNI}$ MPLQKTTMSAVQMRLELHVVKTLI ENA |
| UniRef90-L5K522 | FSSCLFQTKGQTSE EVNVIEDLI DNYVEIF |
| UniRef90-C1G7W8 |  |
| UniRef90_U3FBI8 | S |
| UniRef90-Q5TG30 | MAPNLFRPPPKGKEKQLAEGAAEVVQDMVHYQDLLW |
| UniRef90-N1JEV2 |  |
| UniRef90-S9RDK2 | FSPTLNDPSE VFNMLIENYELIF |
| UniRef90-S8EEU6 | F A P M T K M S P L T A L M Y A VK VMN FLK TL I |
| UniRef90-K1PZ72 | MAPNCLRCEDPHT DFENTRKEMGFI RTLI QNDDTSF |
| UniRef90-H9KMJ6 | WGPTLM HAGENSAEEWNRSETRVIGDLI K L Y PKL |
| UniRef90-Q54WY8 | FSPTLLRPKEESSMMTDSNSDSEVVRVLIEEFHVLY |
| UniRef90-B2AXJ7 | FQPGMLSHPHHAMAPEEYRLNQLVI IFLI ENQDHF |
| UniRef90_Q17FX7 | LAP SLLFYSQPDEKELSETRASHDCLAFLI Q N Y R Th W |
| UniRef90-W7KFG0 | FAPTFFRSKTPNAIFTETSLANKCMQMII Q P P D L |
| UniRef90-P40809 | FAPTLFG D L D L T L ENVVTWQRVLKVLL |
| UniRef90-V5HZ60 | FGPSIIRPCSNAASQS |
| UniRef90-S9XDC6 | GPNLLWPPEKEGDPAQLDQVVGVVEALIQNADTL |
| UniRef90-W4Y2B7 | SLFQGKPDQKELIENVA ANECLALMI R E CKKLF |
| UniRef90-I3KSL0 | GPTIMPEPSPSTILRDTNTQDKVVCCL |
| UniRef90-F7FZ90 | APSLFHGKPDQK DLSENLA A T Q GLA HMI T ECHQLF |
| UniRef90-D6W7C8 | FAPNCLRCSDPRTMFDNARKEMAFMRCLI QDL |
| UniRef90-D3BNW1 | FAPNLLTKGETGND DVIEVMI NMFDEI |
| UniRef90_B4LPF0 |  |
| UniRef90-EOVGW8 | FGP\\|LMLHAEPGTDL DFNQP |
| UniRef90-UPI0002C3D4A4 | FSPVLLNTNNKEIINNDVVWGIEVVTFLLCEYSHLF |
| UniRef90-H3C726 | MSPNLFSCLRPKNKSSAAKQQQELIRLMI THQDLLW |
| UniRef90-X1Y4U4 | LSPTLL QMSHRLFVAVLCHCSTLF |
| UniRef90-W5K2K3 | FGPNVLHTVQSSARAEESAAVIRVIQRMI DS HESLF |
| UniRef90_G3V905 |  |





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UniRef90 UPI00026526A0 UniRef90-UPI0003D07772
UniRef90-H3CA25
UniRef90-S2KJS5
UniRef90 S4RIT4
UniRef90-B7QE10
UniRef90-P39083
UniRef90_B1N3W6
UniRef90 A0A016WWT7
UniRef90_E7FBYO
UniRef90_A0A044V178
UniRef90 I2H677
UniRef90 T1E554
UniRef90-T1EE5
UniRef90 B4NHK4
UniRef90 H3FSU1
UniRef90-UPI0002C3E6A7
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